Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	near3 compl\$5 ) and element E		US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:42
L2	1	(document near3 edit\$3 ) same (dtd near3 compl\$5 ) and element and automata	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:43
L3	0	(document near3 edit\$3 ) same (dtd near3 compl\$5 ) and element and fsa	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:44
L4	5	(document near3 edit\$3 ) same (dtd near3 compl\$5 ) and element and state	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:55
L5	1	(document near3 edit\$3 ) same ((dtd near3 compl\$5 ) or "model checker" ) and element and (fsa or automata)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:56
L6	5	(document near3 edit\$3 ) same ((dtd near3 compl\$5 ) or "model checker" ) and element and (fsa or automata or state)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:56
L7	5	(document near3 edit\$3 ) same ((dtd near3 compl\$5 ) or "model checker" or (spin near5 verification) ) and element and (fsa or automata or state)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:57
L8	19	(document near3 edit\$3 ) same (((dtd or schema) same compl\$5 ) or "model checker" or (spin same verification) ) and element and (fsa or automata or state)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:13
L9	16488	(dtd or schema or spin) same (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:16

L10	440	(dtd or schema or spin) same (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) same element same (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:16
L11	17	((dtd or schema or spin) near5 (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) ) near5 (fsa or automa\$2 or state or graph\$3 ) same element	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:17
L12	17	l11 not l8	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:30
L13	100	708/420.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:31
L14	1	708/420.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:32
L15	0	708/421.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:32
L16	0	708/440.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:32
L17	1	708/42?.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 ).	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:33
L18	609	715/513.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:34
L19	67	715/530.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 08:34

L20	4	717/112.ccls. and (dtd or schema or spin) and (compl\$5 or verif\$7 or valid\$5 or correct\$4 or "model checker" ) and element and (fsa or automa\$2 or state or graph\$3 )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/11/21 08:34
S1	545	(xml or ml or dtd or schema) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 15:32
S2	455	(xml ) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 16:01
S3	33	(xml ) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and "regular expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 15:34
S4	0	(xml ) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and ((edges and states) near5 element )	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR .	ON	2006/11/20 15:35
S5	0	(xml ) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and ("set of states") near5 element	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 15:36
S6	484	glushkov	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 15:36
S7	1	glushkov and edges and "regular expression"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 15:36
S8	4	glushkov and edges and states	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 15:36
S9	0	(xml ) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and (tree near5 automata)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 16:01

S10	208	(xml ) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and tree and states	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 16:03
S11	89	(xml) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and tree and states and (regular or grammar or automata)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 16:07
S12	89	(xml) near5 ( "document editor" or editor) and (comply\$3 or compliance or valid\$3 or correct\$2 or guidance or hint) and tree and states and (regular or grammar or automata)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 17:00
S13	0	rita and dtd same compliant	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 17:01
S14	0	(cowan and mackie).in. and dtd same compliant	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 07:38
S15		(cowan and mackie).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 17:02
S16	0	(pianosi and smit).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/20 17:02

						Sign in
Google	Web	<u>Images</u>	Video	<u>News</u>	<u>Maps</u>	more »
	glushk	ov and fin	ite autom	ata		Search Ac Pro
		AND" ope t. [ <u>details]</u>		unnecess	sary w	e include all search

Web Results 1 - 10 of about 11,100 for glushkov and finite automata. (0.22

# Regular Expressions into Finite Automata - Bruggemann-Klein ...

The **Glushkov automaton** that corresponds to a regular expression is used for checking ... 0.3: A Taxonomy of **Finite Automata** Construction Algorithms - Watson ...

citeseer.ist.psu.edu/398430.html - 24k - Cached - Similar pages

# Regular Expressions into Finite Automata - Bruggemann-Klein ...

Regular expressions into **finite automata**. To appear in the conference proceedings of ... 29 Russian Mathematical Surveys (context) - **Glushkov**, theory - 1961 ... citeseer.ist.psu.edu/328014.html - 19k - <u>Cached</u> - <u>Similar pages</u> [ <u>More results from citeseer.ist.psu.edu</u> ]

## [DOC] Regular Expressions into Finite Automata

File Format: Microsoft Word - View as HTML

The second issue is building the **Glushkov automaton** in O(size of E) for ... If E is deterministic, then the deterministic **finite automaton** ME can be ... webcourse.cs.technion.ac.il/236826/Spring2005/ho/WCFiles/Regular% 20Expressions%20into%20Finite%20Automata.doc - Similar pages

## > From regular expressions to finite automata

There are three classical algorithms to compute a **finite automaton** from a ... The Brzozowski algorithm yields a deterministic **automaton**, the **Glushkov** ... cat.inist.fr/?aModele=afficheN&cpsidt=1242385 - Similar pages

## Regular expressions into finite automata

Regular expressions into finite automata. A BRÜGGEMANN-KLEIN ... Moreover, the Glushkov construction also plays a significant role in the document ...

cat.inist.fr/?aModele=afficheN&cpsidt=3972312 - Similar pages

# [PDF] On the imbedding of asynchronous automata into a product of finite ...

File Format: PDF/Adobe Acrobat

OF FINITE. AUTOMATA. E'. A. Vartapetov. UDC 51:621.391. In the well-known monograph by V. M. Glushkov [1] various devices for constructing real automata ...

www.springerlink.com/index/P6RM420183001326.pdf - Similar pages

## Canonical derivatives, partial derivatives and finite automaton ...

8 {8} V.M. Glushkov, The abstract theory of automata, Russian Math. ... nerve nets and finite automata, Automata Studies Annals of Mathematics Studies Vol. ...

portal.acm.org/citation.cfm?id=637768&

dl=ACM&coll=&CFID=15151515&CFTOKEN=6184618 - Similar pages

## Informal Essays: Iterated Finite Automata

And in fact, such iterated **finite automata** seem like a rather nice systems, ... (Grigorchuk says that Victor **Glushkov**---who was a major wheel in Soviet ... www.stephenwolfram.com/publications/informalessays/iterated**finite**/ - 22k - Cached - Similar pages

### Finite-state automata and directed acyclic graphs

The Glushkov or McNaughton-Yamada construction produces smaller automata. ... Bruce W. Watson, A Taxonomy of finite automata minimization algorithms, ...

odur.let.rug.nl/alfa/fsa\_stuff/ - 93k - Cached - Similar pages

# [PDF] A Unified Construction of the Glushkov, Follow, and Antimirov ...

File Format: PDF/Adobe Acrobat - View as HTML

Regular expressions into **finite automata**. Theoretical Com-. puter Science, 120(2):197–213, 1993. 5. P. Caron and M. Flouret. **Glushkov** construction for ...

cs.nyu.edu/web/Research/TechReports/TR2006-880/TR2006-880.pdf -  $\underline{Similar\ pages}$ 

Result Page: 1 2 3 4 5 6 7 8 9 10 Next

Try Google Desktop: search your computer as easily as you search the web.

glushkov and finite automata

Search,

Search within results | Language Tools | Search Tips | Dissatisfied? Help us improve

Google Home - Advertising Programs - Business Solutions - About Google

©2006 Google



Subscribe (Full Service) Register (Limited Ser

Search: © The ACM Digital Library © The

THE GUIDE TO COMPUTING LITERATURE

Feedback Report a problem

Descriptional complexity of finite automata: concepts and open problems

Source Journal of Automata, Languages and Combinatorics archive

Volume 7, Issue 4 (September 2002) table of contents

Third international workshop on descriptional complexity of autor

related structures Pages: 519 - 531

Year of Publication: 2002

ISSN:1430-189X

Author Juraj

Lehrstuhl für Informatik I, RWTH Aachen, Ahornstraße

Hromkovič

Germany

Publisher Otto-von-Guericke-Universitat Magdeburg, Germany, Germany

Additional

Information:

abstract references citings index terms collaborative

**Tools and Actions:** 

Find similar Articles Review this Article

Save this Article to a Binder Display Formats: BibTex

### **↑ ABSTRACT**

"Automata theory is not over" is the message of this paper. But if one wishes automata theory, then one should prefer to return to the investigation of the fu problems of automata theory rather then searching for new applications and d questionable modifications of basic models. We argue for this opinion here ar that could lead to a renaissance of automata theory.

#### **↑ REFERENCES**

Note: OCR errors may be found in this Reference List extracted from the full opted to expose the complete List rather than only correct and linked reference

- 1 {1} H.N. ADORNA, 3-Party message complexity is better than 2-party on bounds on the size of minimal nondeterministic finite automata. In: Proc. 3rd. Descriptional Complexity of Automata, Grammars and Related Structures. Pr Magdeburg, 2001, 23-34.
- 2 {2} H.N. ADORNA, Some properties of k-party message complexity. Unp RWTH Aachen, 2002. (Accepted for DLT '02.)
- 3 {3} R. BOOK, S. EVEN, S. GREIBACH, G. OTT, Ambiguity in graphs a Transactions Comput.20 (1971), 149-153.
- 4 <u>Piotr Berman, A Note on Sweeping Automata, Proceedings of the 7th Coll Languages and Programming, p.91-97, July 14-18, 1980</u>
- 5 Anne Brüggemann-Klein, Regular expressions into finite automata, Theorescience, v.120 n.2, p.197-213, Nov. 22, 1993
- 6 Pavol Duris, Juraj Hromkovic, José D. P. Rolim, Georg Schnitger, Las V Determinism for One-way Communication Complexity, Finite Automata, and Computations, Proceedings of the 14th Annual Symposium on Theoretical As Science, p.117-128, February 27-March 01, 1997
- 7 {7} A. EHRENFEUCHT, P. ZEIGER, Complexity measures for regular ex System Sci.12 (1976), 1-36.
- 8 {8} V. GEFFERT, personal communication.
- 9 <u>Ian Glaister</u>, <u>Jeffrey Shallit</u>, <u>A lower bound technique for the size of nond automata</u>, <u>Information Processing Letters</u>, v.59 n.2, p.75-77, <u>July 22</u>, 1996
- 10 Jonathan Goldstine, C. M. R. Kintala, Detlef Wotschke, On measuring r regular languages, Information and Computation, v.86 n.2, p.179-194, June 19
- 11 {11} V.M. GLUSHKOV, The abstract theory of automata. Russian Math 53 (translation from Usp. Math. Nank16 (1961), 3-41).
- 12 Jonathan Goldstine, Hing Leung, Detlef Wotschke, On the relation between nondeterminism in finite automata, Information and Computation, v.100 n.2,
- 13 John E. Hopcroft, An n log n algorithm for minimizing states in a finite a

### University, Stanford, CA, 1971

- 14 John E. Hopcroft, Jeffrey D. Ullman, Introduction To Automata Theory, Computation, Addison-Wesley Longman Publishing Co., Inc., Boston, MA, 1
- 15 <u>J. Hromkovič, Communication complexity hierarchy, Theoretical Compup. 109-115, Dec., 1986</u>
- 16 <u>Juraj Hromkovič, Communication complexity and parallel computing, Sp. York, Inc., Secaucus, NJ, 1997</u>
- 17 <u>Juraj Hromkovic, Georg Schnitger, On the power of Las Vegas II: two-w</u> <u>Theoretical Computer Science, v.262 n.1-2, p.1-24, July 2001</u>
- 18 <u>Juraj Hromkovič</u>, Georg Schnitger, On the power of Las Vegas for one-vecomplexity, OBDDs, and finite automata, Information and Computation, v.16 <u>September 15, 2001</u>
- 19 <u>Juraj Hromkovic</u>, <u>Juhani Karhumäki</u>, <u>Hartmut Klauck</u>, <u>Georg Schnitger Measures of Nondeterminism in Finite Automata</u>, <u>Proceedings of the 27th Inton Automata</u>, <u>Languages and Programming</u>, p.199-210, <u>July 09-15</u>, 2000
- 20 <u>Juraj Hromkoviče</u>, <u>Sebastian Seibert</u>, <u>Thomas Wilke</u>, <u>Translating regula</u> <u>εe-free nondeterministic finite automata</u>, <u>Journal of Computer and System Sci</u> <u>588</u>, <u>June 2001</u>
- 21 {21} D.A. HUFFMAN, The synthesis of sequential switching circuits. J. (1954) 3/4, 161-190 and 257-303.
- 22 <u>Tao Jiang</u>, B. Ravikumar, Minimal NFA problems are hard, SIAM Journ n.6, p.1117-1141, Dec. 1993
- 23 {23} G. JIRÁSKOVÁ, Finite automata and communication protocols. In MITRANA (eds.), Words, Sequences, Grammars, Languages: Where Biology Linguistic and Mathematics Meet II, to appear.
- 24 <u>Hing Leung, Separating Exponentially Ambiguous Finite Automata from Ambiguous Finite Automata, SIAM Journal on Computing, v.27 n.4, p.1073-</u>
- 25 {25} H. LEUNG, Tight lower bounds on the size of sweeping automata.

Sciences, to appear.

- 26 {26} Y. LIFSHITS, A lower bound on the size of  $\epsilon$ -free NFA correspond expression. Manuscript, St. Petersburg, State University, 2002.
- 27 {27} G.M. MEALY, A method for synthesizing sequential circuits. Bell Journal34 (1955) 5, 1045-1079.
- 28 {28} A. MEYER, M. FISCHER, Economy in description by automata, gl systems. In: Proc. 12th SWAT Symp. 1971, 188-191.
- 29 {29} S. MICALI, Two-way deterministic automata are exponentially mosweeping automata. Inform. Proc. Letters12 (1981), 103-105.
- 30 {30} R.F. MCNAUGHTON, M. YAMADA, Regular expressions and sta IRE Trans. Electron. Comput.9 (1960), 39-47.
- 31 {31} E.F. MOORE, Gedanken experiments on sequential machines. In: {
- 32 {32} F. MOORE, On the bounds for state-set size in the proofs of equiva deterministic, nondeterministic and two-way finite automata. IEEE Trans. Co 1214.
- 33 {33} A. MUSCHOL, personal communication.
- 34 B. Ravikumar, O. H. Ibarra, Relating the type of ambiguity of finite auto succinctness of their representation, SIAM Journal on Computing, v.18 n.6, p
- 35 {35} M.O. RABIN, D. SCOTT, Finite automata and their decision proble and Development3 (1959) 2, 115-125.
- 36 <u>William J. Sakoda</u>, <u>Michael Sipser</u>, <u>Nondeterminism and the size of two Proceedings of the tenth annual ACM symposium on Theory of computing</u>, p. 1978, San Diego, California, United States
- 37 Erik Meineche Schmidt, Succinctness of descriptions of context-free, reg languages., 1978
- 38 {38} C. E. SHANNON, J. MCCARTHY, Automata Studies. Princeton U
- 39 {39} M. SIPSER, Lower bounds on the size of sweeping automata. J. Co.

(1980), 195-202.

- 40 <u>Seppo Sippu, Eljas Soisalon-Soininen, Parsing theory. Vol. 1: languages Verlag New York, Inc., New York, NY, 1988</u>
- 41 {41} R. STEARNS, H. HUNNT, On the equivalence and containment prunambiguous regular expressions, regular grammars, and finite automata. SIA (1985), 598-611.
- 42 <u>Ken Thompson, Programming Techniques: Regular expression search alg Communications of the ACM, v.11 n.6, p.419-422, June 1968</u>
- 43 {43} S. YU, A Renaissance of Automata Theory? Bulletin of the EATCS

#### **↑ CITINGS**

Galina Jirásková, State complexity of some operations on binary regular lange Computer Science, v.330 n.2, p.287-298, 2 February 2005

#### **↑ INDEX TERMS**

### **Primary Classification:**

- F. Theory of Computation
- ← F.1 COMPUTATION BY ABSTRACT DEVICES
  - Strain Models of Computation
    - Subjects: Automata (e.g., finite, push-down, resource-bounded)

#### **Additional Classification:**

- F. Theory of Computation
- ← F.1 COMPUTATION BY ABSTRACT DEVICES
  - ← F.1.3 Complexity Measures and Classes
    - Subjects: Complexity hierarchies

#### General Terms:

**Theory** 

### **Keywords:**

automata, descriptional complexity, regular languages

### ↑ Collaborative Colleagues:

Juraj Hromkovič: Pavol Ďuriš

Walter Unger

Hans-Joachim Böckenhauer

Dirk Bongartz Katsushi Inoue Stasys Jukna Ralf Klasing

Guido Proietti

Martin Sauerhoff Georg Schnitger Sebastian Seibert

The ACM Portal is published by the Association for Computing Machinery ACM, Inc.

Terms of Usage Privacy Policy Code of Ethics Contact

Useful downloads: Adobe Acrobat QuickTime Windows Med Player